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Teachers Are: Analyzing the Metaphors of Pre-Service Educators

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Abstract

Metaphors are often used by in-service educators to describe themselves and their work in the classroom. These metaphors can articulate in-service teachers' fundamental dispositions and provide the vehicle for conceptualizing teaching practices. Pre-service educators (those engaged in preparation to enter the teaching vocation), however, are a different population for whom metaphors represent relatively untested assumptions about the classroom and the practices that pervade it. These metaphors should be considered an asset which, if effectively utilized, can aid in the work of teacher preparation. To that end, this study employed the Conceptual Metaphor Theory of Lakoff & Johnson (1980) within the propositional analysis framework of Steen (1999) to provide a generalizable approach to metaphor analysis that could be used in educator preparation programs.

Keywords

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Metaphors are often used by in-service educators to describe themselves and their work in the classroom. These metaphors can articulate teachers' fundamental dispositions and provide the vehicle for conceptualizing teaching practices. Pre-service educators, however, are a different population for whom metaphors represent relatively untested assumptions about the classroom and the practices that pervade it. These metaphors should be considered an asset which, if effectively utilized, can aid in the work of teacher preparation. To that end, this study employed the Conceptual Metaphor Theory of Lakoff & Johnson (1980) within the propositional analysis framework of Steen (1999) to provide a generalizable approach to metaphor analysis that could be used in educator preparation programs.
Keywords: Metaphor, teacher identity, educator preparation

Introduction

Teachers are coaches. Teachers are mother ducks. Teachers are generals of an army. Metaphors like these are often used by in-service educators to describe themselves and their work in the classroom. These metaphors can articulate in-service teachers' fundamental dispositions as well as provide the vehicle for conceptualizing teaching practices. Pre-service educators, however, are a different population for whom metaphors represent relatively untested assumptions about the classroom and the practices that pervade it. These metaphors should be considered an asset which, if effectively utilized, can aid in the work of teacher preparation. That is to say, working with metaphors in the pre-service phase can encourage reflection that shapes (or reshapes) teaching practice by revealing the implications of one's metaphor. This conclusion is supported by Cortazzi and Jin (1999) who note:

> Advocates [for the use] of metaphors in teacher training certainly do not see the generation of metaphors for teaching as a verbal game. Rather they see metaphor activity as a bridge to talking meaningfully

about practice, to understanding practice, and crucially as part of
practice itself. (p.156)

How might metaphors be used as a tool for exploring and even shaping future
practice for pre-service educators, as Cortazzi and Jin imply? The answer lies
with the employment of propositional analysis as both a vehicle for reflection
as well as a tool for teacher preparation, resulting in an exploration of
metaphors that is instructional rather than theoretical.

The notion of metaphor comes from the ancient Greek word
metapherein. Metapherein has as its base the prefix meta, meaning *after* or
beyond. The remainder of the word, pherein, means *to carry*. Thus, the claim
of the ancient Greeks is that metaphors carry us beyond our current reality to
reveal something new. And while this is perhaps anecdotally true, it is also
supported by research. As Fetterman, Bair, Werth, Landkammer and Robinson
(2016) note, "Approximately 10 years of research have supported the idea that
conceptual metaphors influence processing and behavior." This research
includes the work of Landau, Meier and Keefer (2010), Williams and Bargh
(2008) and Jostmann, Lakens and Schubert (2009), each of whom found that
the metaphors we use to conceptualize our environment and our experiences
are distinctly manifest in subsequent thoughts and actions. That is to say, the
use of metaphors may be predictive of future thinking and action. Geary
(2011) adds that metaphorical thinking "shapes our view of the world, and is
essential to how we communicate, learn, discover and invent" (p.3). Some
even go so far as to conclude that metaphors create new realities rather than
simply describe current realities (Lakoff and Johnson, 1990). If true, then
studying the metaphors by which we live can help us "characterize a coherent
system of metaphorical concepts and a corresponding coherent system of
metaphorical expressions for those concepts" (Lakoff and Johnson, 1990, p.9).
So how about the metaphors by which we teach? Do they have the same
significance?

Theoretical Framework

According to Lakoff & Johnson (1980), metaphors come in three different
forms - structural metaphors, orientational (or spatial) metaphors and
ontological (or entity and substance) metaphors. Structural metaphors are
those whereby one concept is metaphorically structured in terms of another
(Lakoff & Johnson, 1980). An example of this would be the claim, *argument
is war*. Structural metaphors are not intended to be generalized beyond this
one-to-one relationship, insofar as "The very systematicity that allows us to
comprehend one aspect of a concept in terms of another…will necessarily hide
other aspects of the concept" (Lakoff & Johnson, 1980, p.10). Indeed, an
argument has other attributes unrelated to war – listening and seeking
clarification, for example. For this reason, when a structural metaphor is
employed, it is not useful to extend it. Orientational metaphors, however, are

intended to be generalized and extended. Orientational metaphors are defined as those that organize a whole system of concepts with respect to one another (Lakoff & Johnson, 1980). Most of these involve spatial orientation such as the statement, *I'm feeling up today*, wherein happiness is assigned the spatial orientation up. Thus, the metaphor can be extended to include such statements as *I'm feeling down* and *today went sideways*. A third and final category, ontological metaphors, allow us to identify our experiences as entities or substances (Lakoff & Johnson, 1980) such as the phrase, *teachers are gardeners* (which implies that the act of teaching embodies similar attributes and characteristics to gardening that are worthy of comparison and further exploration). These three varieties of metaphor constitute a significant portion of Lakoff & Johnson's Conceptual Metaphor Theory, considered to be a lodestar for studying metaphors in use.

This study considers teaching metaphors as ontological in nature, insofar as ontological metaphors focus foremost on an experience (the act of teaching) and the identity that accompanies that experience. The value of applying the ontological lens within this theoretical framework - as opposed to an orientational one, for example - is well stated by Lakoff and Johnson (1980):

> But one can do only so much with orientation. Our experience of physical objects and substances provides a further basis for understanding - one that goes beyond mere orientation. Understanding our experiences in terms of objects and substances allows us to pick out parts of our experience and treat them as discrete entities or substances of a uniform kind. (p.25)

It is the discrete nature of ontological metaphors that gives them ultimate value, because once experiences are identified as an entity or a substance, "we can refer to them, categorize them, group them and quantify them and by this means, reason about them" (Lakoff and Johnson, 1980, p.25). In employing Lakoff & Johnson's Conceptual Metaphor Theory as a theoretical framework, and further drilling down to the ontological metaphor level, metaphorical statements become discretely bound in a manner that allows them to be explored and analyzed.

Research Context

Student-constructed metaphors constituted the data for this research, a portion of which is provided in Table 1. Eleven students - all enrolled in the same accredited undergraduate educator preparation program - agreed to make their metaphors and subsequent reflection available for this study. Eight of the participants identified as male and three identified as female; each self-identified as European American. At the time of data collection, all of the students were seeking degrees that would allow them to teach in grades 6-12

classrooms. Among the group were five students pursuing licensure in physical education, two students pursuing licensure in the sciences, two students pursuing licensure in the social sciences, one student pursuing licensure in mathematics, and one student pursuing licensure in the visual arts. While most members of the group were traditional undergraduate students, three were students who had returned to school after time spent working in a different field.

Table 1

Pre-Service Educator Metaphors

Teachers are:	Partial Student Explanation
the captain of a ship	"The teacher will steer the class in the direction they need to go and help them navigate the material"
sailors navigating around an iceberg	"A sailor can utilize the same model to navigate around an iceberg by first planning how to do so and preparing the ship and crew for the journey"
fisherman	"The big catch is figuring out what that one student needs to finally get it and learn something new"
dancers	"Teachers practice and skillfully choreograph their moves in the classroom"
athletes jumping rope in front of a mirror	"Effective teachers need to be able to reflect on their actions, instructions, activities and make accommodations and modifications"
quarterbacks going back to watch game film	They look at the game plan and look for openings and prepare a plan of attack. after a game. Then they implement their plan and might have to make adjustments on the fly"

coaches	"Coaching is correcting, so don't be offended by what I say and think I am picking on you."
generals of an army	"Effective teachers, like generals, have experience in battle to help them make decisions"
watchmakers	"Assessing and adjusting all the moving parts of their learning environment, making sure these parts work together effectively to render consistent, accurate, observable results."
mother ducks	"They establish a safe and friendly environment"
supervillains	"The lair of a supervillain is designed to create an environment in which the superheroes will get caught up. This is much like a classroom which is intelligently designed to draw the students in."

As a course assignment, students were asked to create a metaphor by completing the statement, "A teacher is a" or an appropriate derivative thereof. The metaphors were then analyzed in a subsequent class session using the Conceptual Metaphor Theory of Lakoff & Johnson (1980) within the propositional analysis framework of Steen (1999), both of which are explored in detail in the Methodology portion of this paper. Based on this initial analysis, a reflection on the strengths and weaknesses of individual metaphors occurred. Students were asked to identify (a) the ways in which their metaphors were supported by pedagogical theory, (b) the ways in which their metaphors stood in opposition to pedagogical theory and (c) what a future classroom would look like based on the employment of that metaphor. Greater detail on this process is provided in the sections that follow.

Methodology
There are many ways to analyze a metaphor. Steen (1999) offers one possibility in the form of a linguistic checklist, which rests on the notion that when presented with a metaphor, "the words of the text are taken as pointers to concepts, which are presumed to be activated and related to the syntactic, semantic and pragmatic instructions for processing inherent in the consecutive sentences" (p.83). That is to say, "The figuratively used words in a metaphor

are about something, but that something needs not be expressed in the same clause" (Steen, 1999, p.84). This means that metaphors are not always self-contained; a metaphor often extends into consecutive sentences or references, thus complicating the analysis. Take, for example, the following statement from the data used in this study:

(1) *An effective teacher is a mother duck.*

Here the metaphor is explicit, meaning that "the literal referent of a metaphor is expressed in the same clause" (Steen, 1999, p.84). Given that this metaphor meets the aforementioned criteria, Steen first offers the possibility of employing Black's (1979) Focus and Frame schema as a means of analysis, whereby *Focus* refers to "the odd term in a linguistic expression which draws the attention of the interpreter" (Steen, 1999, p.86) and *Frame* "designates the background against which the Focus can been seen to stand out" (Steen, 1999, p.86). In other words, with (1) referenced above, *mother duck* is the Focus and *An effective teacher is X* is the frame. This is a standard and uncontroversial approach to metaphor analysis. However, the Focus and Frame analytical framework does not work in all circumstances, particularly those where the metaphor is not so explicit. Take, for example, another statement from the student samples collected for this research:

(2) *Effective teachers are sailors navigating around an iceberg.*

The metaphor (2) above has both explicit and implicit attributes, which complicates its analysis. With (2) the Frame is defined as *Effective teachers are X.* This is clear and is the context for the noun *sailor*, which then is the Focus. Yet in this circumstance, the metaphor is extended to include a second Focus and Frame, wherein *navigating around an iceberg* is the Frame (the background against which the focus can be seen) and the term *sailor* is again the Focus. Utilizing the analytical framework presented by Black (1979) in this case is complicated because the metaphor operates with two different Frames, one bearing no linguistic relationship to the metaphorical proposition of the other. It is for this reason that Steen (1999) offers an alternative:

> I propose that metaphor analysis should not start with the linguistic analysis of sentences in terms of Focus and Frame, but with the conceptual analysis of propositions. Taking propositional analysis as the vantage point for metaphor analysis is the best strategy, I wish to argue, for revealing what is literal and what is non-literal in the stretch of discourse under investigation, as well as in the underlying metaphorical comparison. (p.88).

It was previously determined that metaphor (1) could be analyzed using Black's (1979) Focus and Frame, but metaphor (2) contained attributes that complicate the analytical paradigm. Using propositional analysis, both can be analyzed, and the results used to deeply explore the meaning of the metaphors themselves. Propositional analysis begins with one question in particular: What is the metaphorical proposition in terms of its literal referent and non-literal predicate (Steen, 1999)? Starting with (1), the literal referent is *An effective teacher* and the non-literal predicate is *a mother duck*. This implies the proposition that there is some property of teaching which is like some property of being a mother duck. In beginning with the propositional analysis framework, its application could look like this:

Teachers are to students as mother ducks are to ducklings.

This is simple. Consider, however, what happens when one starts to do the work of deconstructing the underlying metaphorical comparison which is driven by the propositional analysis through a structural mapping, adapted from Steen (1999) and Lakoff and Johnson (1980). The mapping of this metaphor could look like this:

Mother ducks : nurture
*   : modeling*
Ducklings   : follow
*   : mimic*

In turn, a full analysis could take this form :

Teachers *are* mother ducks.
Teaching *is* mothering.
Mothering *is* nurturing.
Mothering *is* modeling.
Students *are* ducklings.
Learning *is* following.
Learning *is* mimicking

For a student who initially concludes that (1) *An effective teacher is a mother duck,* the following could be a true: The classroom would likely be a warm, nurturing and protective environment where the primary objective of the teacher is to model specific behaviors and processes. In this environment, the role of the student would be to follow the example of the teacher by mimicking or recreating the aforementioned behaviors and processes. Challenges within this classroom might involve the development of initiative and independence among students. This paints a more vivid image of the

intended classroom for a pre-service teacher who has yet to put their metaphor into practice. More importantly, propositional analysis creates a space for dialogue about the intention of the metaphor, its strengths and limitations.

The analysis of (1) *An effective teacher is a mother duck* outlined above may raise an objection predicated on the relative subjectivity of the mapping itself. For example, one's own experience with mother ducks and her ducklings could lead to a different interpretation. The nature of any linguistic analysis - and particularly the exploration of metaphor - presumes a level of subjectivity. Lakoff and Johnson (1980) make note of so-called "challenges to metaphorical coherence" (p.41) and write that "In general, metaphorical concepts are defined not in terms of concrete images...but in terms of more general categories" (p.45). It is from these general categories that a propositional analysis is derived, and a general thematic mapping emerges. It is, therefore, not the goal of propositional analysis to settle on the objective reading of a metaphor and its meaning. Rather, the goal is to open up the potential implications of a metaphor for further exploration, all within the context of an interpretation that honors the inferences intended by the metaphor-maker. The hope is to illuminate the shared ground between the originator of a metaphor and the interpreting party. In this sense, subjective interpretation derived from experience or cultural influences is welcomed and included as a valuable part of the analysis.

Data Analysis

As previously stated, eleven students completed the initial task of authoring their metaphor as a course assignment, and then each metaphor (see Table 1) was mapped by students using the aforementioned theoretical and analytical frameworks. All told, this process occupied two hour-long class sessions. Exploration of strengths and limitations then came by way of three reflection questions. Students were asked to identify (a) the ways in which their metaphors were supported by pedagogical theory, (b) the ways in which their metaphors stood in opposition to pedagogical theory and (c) what a future classroom would look like based on the employment of that metaphor. Student examples related to (a), (b) and (c) shed light on the value and implications of utilizing metaphors in this way.

Relative to question (a), the student who concluded that "Teachers are fisherman" felt that such a metaphor was supported by the theory of differentiation. Just as different types of fish require various bait and presentation, so, too, do children in a classroom. Of this, the student wrote, "The big catch is figuring out what that one student needs to finally get it and learn something new." Another student noted that their metaphor was most informed by a behaviorist, teacher-centric, philosophy of education ("Teachers are the captain of a ship"), writing that such an approach means "The teacher will steer the class in the direction they need to go and help them navigate the material." One student even saw fit to connect their metaphor to Vygotsky's Zone of Proximal Development (1978). This individual, who concluded that

"Teachers are sailors navigating around an iceberg" commented that "effective teachers have two critical dimensions – intent and achievement" and that the difference between intent and achievement for many children is "having a skilled educator help them navigate the task – the iceberg."

When reflecting on question (b), the student who had constructed the metaphor, "Teachers are generals of an army" identified the following concern:

> The only major pedagogical issue there might be is that a general sometimes can be seen as too high above their inferiors. Teachers can't be high above their students. Effective teachers are down in the trenches helping their students succeed.

Another student, who articulated that "Teachers are watchmakers" was worried that the metaphor they had employed was too focused on the teacher and not enough on student outcomes. In expressing this concern, the student wrote, "If we only focus on ourselves, how can we see what's working and what's not working for our students?" And the student who felt that "Teachers are dancers" was concerned that such a metaphor stifled knowledge construction by students, noting that "sometimes you have a whole dance choreographed but that's not how the students want to move."

Perhaps the most revealing facet of this exercise for students who participated in the study was their response to question (c). When asked to hypothesize what a future classroom would look like based on the employment of their metaphor, multiple students chose to extend or elaborate on their metaphor. One student wrote, "Every lesson I teach may not be the lure that catches the big fish, but as I continue to cast my lessons out into water I know that eventually I will make the catch" whereas another student articulated, "I want to be a teacher that is constantly motivated to better myself and I want students to see that I am still willing to learn" - this from the student who articulated that "Teachers are quarterbacks going back to watch film the day after a big game."

At the same time, others chose to reflect critically on their metaphor relative to question (c). One student wrote, "I think that my approach is rigid in its view of how instruction should happen and it contrasts with any approach that is student centered and responsive to student needs." Another was more direct in their criticism, saying "Effective teachers discuss viewpoints other than their own, consider their audience, and present facts and concepts from related fields. These would help benefit the metaphor upon revision." A final student reflected that "Some would say that this metaphor doesn't focus on the students as much as it focuses on the end goal."

Making the Case for Metaphors - Implications and Conclusions
This study is not the first to posit that it is worthwhile to investigate the relationship between metaphors and teaching. Recently, Godor (2019)

reported on the relationship between teaching metaphors, teaching practice, and how students receive their education, Gilroy (2017) highlighted the frequency with which metaphors are employed to explain teaching practices, and Olthouse (2014) utilized metaphors to determine perceptions of gifted students. However, previous studies have not offered much by way of a generalizable theoretical and analytical framework, particularly one that can be replicated and implemented in teacher training and licensure programs. The implications of an ontological metaphor exegeted through propositional analysis are simple: the future classroom and teaching philosophy of a pre-service teacher are laid bare in such a way that their strengths and limitations can be further explored.

The student comments above warrant a revisitation of the idea that applying propositional analysis to pre-service teacher metaphors is worthwhile both as a method for encouraging reflection as well as an instructional tool for teacher preparation. Doing so led students in this study to challenge their own metaphors, with some eventually rejecting what they had initially constructed based on relatively untested assumptions. In at least half of the cases, students chose to alter their metaphors once the analysis illuminated concerns about that metaphor in practice. All of this supports the earlier claim that pre-service teacher metaphors are an asset, insofar as analyzing them encourages reflection and can shape (or reshape) teaching practices.

It is important to point out that the study of metaphors is not unique to the world of preparing teachers; their employment is pervasive throughout the helping professions. For example, metaphors serve for counselors and therapists as a means of identifying behaviors and beliefs in their patients. Witztum, Van der Hart & Friedman (1988) note that the tactical employment of metaphors can be a powerful intervention strategy in the realm of psychology while Marchant (1992) writes that exploring metaphors with patients can serve as a successful technique in therapy settings. That is to say, exploring metaphors can be an effective form of supporting healthy goals and encouraging positive behaviors (Kopp & Craw, 1998). This is very much in keeping with the ethos of this paper. Metaphors can and should be used tactically with pre-service teachers, just as they are in a counseling environment. Doing so is essential because "metaphors are representative of the larger constructs under which teachers organize their thinking and from which they plan their actions" (Mahlios, Massengill-Shaw & Berry, 2010, p.52). Metaphors are often predictive of future teaching practice (Lin, Shein & Yang, 2012; Pajares, 1992; Tobin, 1990) and have "real-world implications not only for understanding teacher identity and beliefs, but also the classroom environments they strive to create" (Erickson & Pinnegar, 2017, p.107). It is often through metaphors that "teachers create identities and shape the worlds they hope to inhabit" (Erickson & Pinnegar, 2017, p.110). Therefore, "Comparing and contrasting metaphors...may well be a helpful means for beginning teachers to develop alternative ways of thinking about teaching and

self" (Bullough & Stokes, 1994, p.200). Without a mechanism for analyzing these metaphors, however, such alternative conceptualizations are difficult.

In addition to the conclusion that metaphor analysis is essential for developing healthy goals and positive behaviors for new teachers, Lawton (1984) points out that some teaching metaphors may have negative ramifications or perpetuate stereotypes of certain students. This, therefore, frames metaphor analysis as an ethical imperative, insofar as a particular metaphor held by a teacher could turn out to limit a student's learning (Bullough & Stokes, 1994). Berci (2007) agrees, writing that "Through metaphor development and the narratives and research it can instigate, [teachers] can increase not only their knowledge of self, but that of their students and of their classroom experience" (p.85). This should be an essential component of teacher training, insofar as it "necessitates that the ethical and moral implications of different conceptions of self as teacher…be confronted and criticized" (Bullough & Stokes, 1994, p.202). The method of analysis described in this paper is intended to be a tool for such confrontation and criticism.

A third and final conclusion derived from this study involves the fact that, without targeted and intentional instruction, teaching metaphors are commonly left unchecked and therefore unchanged (Mahlios, Massengill-Shaw & Berry, 2010). If it is accurate that teaching metaphors lead to beliefs in action (Mahlios, Massengill-Shaw & Berry, 2010), then the metaphors of pre-service teachers are driving pedagogy and classroom management in the early stages of their careers (Mahlios, Massengill-Shaw & Berry, 2010; Richardson, 1996). This bolsters the argument that metaphor analysis and reflection must be a part of pre-service education. Without it, early-career teachers may subject their students to beliefs that are confused or not informed by practice. Tobin (1990) asserts that there is indeed a relationship between a teacher's metaphorical perspective and the quality of their teaching, and that by adopting a new or altered metaphor, one's teaching can improve. Thus, "significant changes in classroom practice are possible if teachers are assisted to understand their teaching roles in terms of new metaphors" (Tobin, 1990, p.123).

For these reasons, a clear and replicable method for analyzing pre-service teacher metaphors should be an essential tool in teacher preparation. The necessity of this can be framed in three ways: as a means of developing healthy goals and positive behaviors, as an ethical imperative when considering others who are affected by a teaching metaphor, and as a method for improving teaching quality. Regardless of the particular implication used as justification for studying metaphors during teacher preparation, employing the Conceptual Metaphor Theory of Lakoff & Johnson (1980) within the propositional analysis framework of Steen (1999) offers a generalizable approach to metaphor analysis that could be employed effectively in multiple contexts.

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